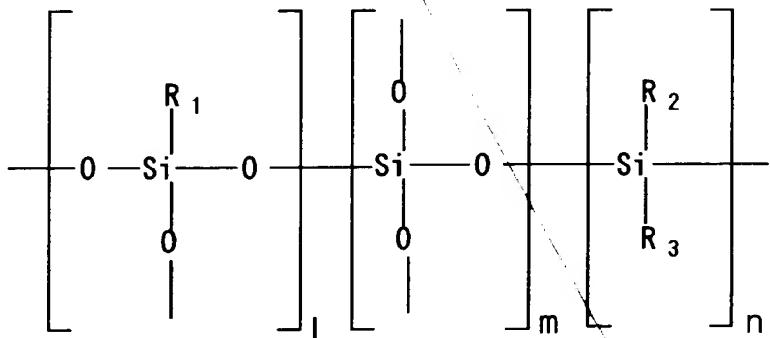


Claim(s)

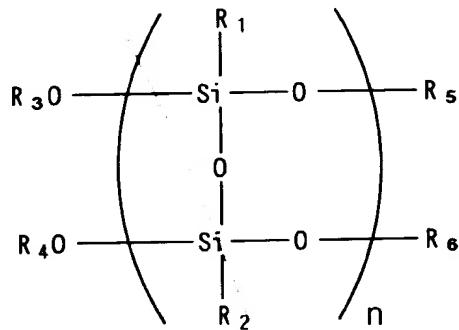
1. A sensor element comprising:
a sensor substrate; and
a flat sensing portion supported by the sensor substrate;
5 wherein the surface of the flat sensing portion is
covered with a silicone resin film.
2. The sensor element according to Claim 1:
wherein the silicone resin film is a film of a cured
silicone polymer.
- 10 3. The sensor element according to Claim 2, wherein the
silicone polymer is represented by the following general
formula (1);



wherein R1, R2, and R3, which may be the same or different,
each is aryl group, hydrogen atom, aliphatic alkyl group,
15 hydroxyl group, trialkylsilyl group or a functional group
having unsaturated bond; and l, m and n each is integers of
0 or more; and has a weight average molecular weight of not
less than 1000.

4. The sensor element according to Claim 2:

wherein the silicone polymer is represented by the following general formula (2);



wherein R1 and R2, which may be the same or different, each is aryl group, hydrogen atom, aliphatic alkyl group or a functional group having unsaturated bond. Notations R3, R4, 5 R5 and R6, which may be the same or different, each is hydrogen atom, aryl group, aliphatic alkyl group, trialkylsilyl group or a functional group having unsaturated bond; n is an integer; and has a weight average molecular weight of not less than 1000.

5. The sensor element according to Claim 3:

wherein the silicone polymer is a photocuring polymer.

6 The sensor element according to Claim 4:

wherein the silicone polymer is a photocuring polymer.

7 The sensor element according to Claim 1:

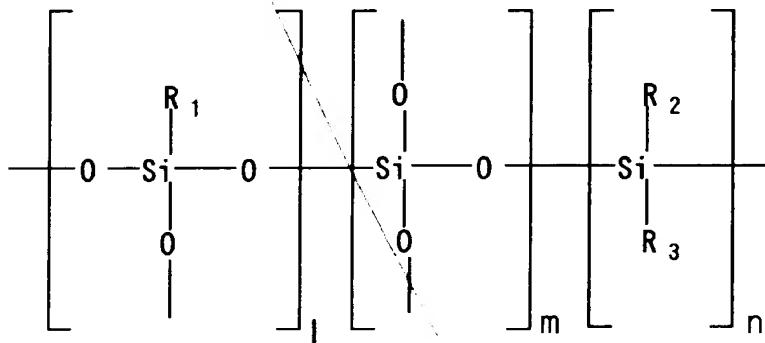
15 wherein the sensor element is selected from a
magnetoresistance sensor, an air flow sensor, an acceleration
sensor, a pressure sensor, a yaw rate sensor and an image
sensor.

8. A method of fabricating a sensor element, comprising

a step of coating a solution of a silicone polymer to a flat sensing portion supported by a sensor substrate and a step of heating and curing thereof, to coat the sensing portion with a silicone resin film.

- 5 9. The method of fabricating a sensor element according to Claim 8:

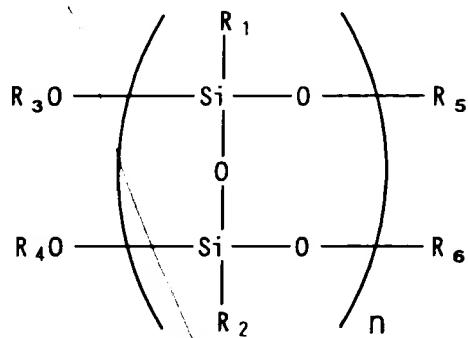
wherein the silicone polymer is represented by the following general formula (1);



wherein R1, R2, and R3, which may be the same or different,
10 each is aryl group, hydrogen atom, aliphatic alkyl group,
hydroxyl group, trialkylsilyl group or a functional group
having unsaturated bond; and l, m and n each is integers of
0 or more; and has a weight average molecular weight of not
less than 1000.

- 15 10. The method of fabricating a sensor element according to Claim 8:

wherein the silicone polymer is represented by the following general formula (2);



wherein R1 and R2, which may be the same or different, each is aryl group, hydrogen atom, aliphatic alkyl group or a functional group having unsaturated bond. Notations R3, R4, R5 and R6, which may be the same or different, each is hydrogen atom, aryl group, aliphatic alkyl group, trialkylsilyl group or a functional group having unsaturated bond; n is an integer; and has a weight average molecular weight of not less than 1000.

11. The method of fabricating a sensor element according to Claim 9:

10 wherein the silicone polymer is a photocuring polymer.

12. The method of fabricating a sensor element according to Claim 10:

wherein the silicone polymer is a photocuring polymer.

13. The method of fabricating a sensor element according to Claim 8:

wherein the step of heating and curing is carried out at temperature of from 100°C to 250°C.